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## Measuring efficiencies of Bangladeshi and Indonesian microfinance institutions: A data envelopment analysis and latent growth curve modeling approach

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### Abstract

**Purpose** The purpose of this paper is to measure the technical efficiency and growth trajectory of Bangladeshi and Indonesian microfinance institutions (MFIs). The motivation for this study was derived from crucial roles that these institutions play in the socio-economic transformation of any nations, especially Bangladesh and Indonesia which are at least prominent in the Asian context in this regard. Rather than proving impact, research endeavors have shifted to focusing on improving the impact of MFIs, because the ability to improve their impact as socio-economic transformation platform may be hinged on their efficiency over time.

**Design/methodology/approach** Data were obtained from MIX market database covering a five-year period from 2007 to 2011 for 20 Bangladeshi and 11 Indonesian MFIs. The data obtained were subjected to both efficiency and trajectory analysis using data envelopment analysis (DEA) based on Malmquist productivity index, independent t-test, and latent growth curve modeling (LGCM).

**Findings** Overall, DEA results indicate that both Bangladeshi and Indonesian MFIs are approximately efficient under constant returns to scale, variable returns to scale, and scale. There has been an improvement in the management practices of Bangladeshi MFIs, while Indonesian MFIs have increased in optimum size. Independent t-test result shows that Bangladeshi MFIs are significantly efficient in terms of performance and firm's size compared to Indonesian MFIs, but there is no significant difference in their efficiencies with regard to technology. The intercept and the slope of the regression weight in the estimated model using LGCM are not significantly different.

**Research limitations/implications** This study measures technical efficiency and growth trajectory of Bangladeshi and Indonesian MFIs over a five-year period. However, future studies could explore this in greater depth by incorporating more data.

**Practical implications** The research findings have great implications for the Bangladeshi and Indonesian MFIs. Since this study is among the first of its kind, the researchers have paved ways for further investigation in this area. Moreover, the study encourages the Bangladeshi and Indonesian MFIs to be more concerned of their efficiencies.

**Originality/value** This study measures technical efficiency and growth trajectory of the Bangladeshi and Indonesian (MFIs). These have never been examined together in this way before.

### Keywords

**Author Keywords:** Efficiency; DEA; MFIs; Independent t-test; LGCM; Mix market

**KeyWords Plus:** PRODUCTIVITY CHANGE; PERFORMANCE; OUTREACH; IMPACT; EAST

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